LISTING OF THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Previously Amended) An arrangement for storing electrical energy comprising:

an electric charge source between a first terminal and a second terminal,

a plurality of electrical storage modules connected in series between the first terminal and the second terminal, each electrical storage module of the plurality of electrical storage modules having a respective nominal module voltage;

a DC-to-DC converter coupled to the electric charge source and to each of the electrical storage modules, the DC-to-DC converter being operable to receive incoming power from the electric charge source and to supply a respective voltage fraction of the DC-system voltage to each electrical storage module

wherein the DC-to-DC converter is further operable to control the respective voltage fraction to vary the respective voltage fraction over a time period within a voltage interval around the respective nominal module voltage of each electrical storage module such that during the time period the respective voltage fraction supplied to each electrical storage module is set to be higher than the respective nominal module voltage of each electrical storage module.

2. (Previously Presented) The arrangement according to claim 1, wherein the voltage interval represents a voltage variation of less than 25% of the nominal module voltage.

3. (Previously Presented) The arrangement according to claim 1, wherein the DC-to-DC converter is operable to control the respective voltage fraction over the electrical storage modules such that an average time interval during which the voltage fraction exceeds the nominal module voltage is substantially equal with respect to all the modules.

4. (Previously Presented) The arrangement according to claim 1, wherein the DC-to-DC converter is operable to control the respective voltage fraction

over the electrical storage modules such that an average voltage fraction of the DC-system voltage being distributed to each module is substantially equally large for all the modules.

5. (Previously Presented) The arrangement according to claim 1, wherein at least two of the electrical storage modules are included in a common battery unit, the unit having a separate set of access points for each module, and each of the access points is coupled to the DC-to-DC converter.

6. (Cancelled)

7. (Previously Presented) The arrangement according to claim 1, wherein the electrical storage modules are operable to provide power to an electrical system of a vehicle via the first and second terminals.

8. (Previously Presented) The arrangement according to claim 1, wherein the electric charge source is an electric generator.

9. (Previously Presented) A motor vehicle comprising an arrangement for storing electrical energy according to claim 1.

10. (Previously Presented) A method of charging a plurality of electrical storage modules connected in series between a first terminal and a second terminal, the method comprising the steps of:

receiving a DC-system voltage between the first terminal and the second terminal;

DC-to-DC converting the DC-system voltage into a respective voltage fraction per electrical storage module;

supplying the respective voltage fraction to each electrical storage module ; and

controlling the respective voltage fraction to vary over a time period within a voltage interval (V_D) around a respective nominal module voltage of each electrical storage module such that the respective voltage fraction supplied to each electrical storage module within the time period is set to be higher than the respective nominal module voltage of each electrical storage module.

11. (Previously Presented) The method according to claim 10, wherein the voltage interval represents a voltage variation of less than 25% of the nominal module voltage.

12. (Previously Presented) The method according to claim 10, further comprising controlling the respective voltage fraction over the electrical storage modules such that an average time interval during which the respective voltage fraction exceeds the respective nominal module voltage is substantially equal with respect to all the modules.

13. (Previously Presented) The method according to claim 10, further comprising controlling the respective voltage fraction over the electrical storage modules such that an average voltage fraction of the DC-system voltage being distributed to each module is substantially equally large for all the modules.

14. (Previously Presented) The method according to claim 10, wherein there are two electrical storage modules.

15. - 16. (Canceled)

17. (Previously Presented) The arrangement according to claim 1, wherein the DC-to-DC converter is operable to control the respective voltage fraction such that when the respective voltage fraction is varied to be above the respective nominal module voltage, another respective voltage fraction is varied to be below the respective nominal module voltage for another respective module.

18. (Previously Presented) The method according to claim 10, wherein the voltage fraction is controlled such that when the respective voltage fraction is varied to be above the respective nominal module voltage, another respective voltage fraction is varied to be below the respective nominal module voltage for another respective module.

19. (Previously Presented) An electrical energy storage system comprising:

an electric charge source between a first terminal and a second terminal,

a plurality of electrical storage modules connected in series between the first terminal and the second terminal, each electrical storage module of the plurality of electrical storage modules having a respective nominal module voltage; and

a DC-to-DC converter coupled to the electric charge source and to each of the electrical storage modules, the DC-to-DC converter being operable:

to receive incoming power from the electric charge source;

to supply a respective voltage fraction of the DC-system voltage to each electrical storage module;

to vary each respective voltage fraction over a period of time within a voltage interval around the respective nominal module voltage of each electrical storage module such that within the period of time the respective voltage fraction supplied to each electrical storage module is set to be higher than the respective nominal module voltage of each electrical storage module;

to control the respective voltage fraction over the electrical storage modules such that an average time interval during which the respective voltage fraction exceeds the respective nominal module voltage is substantially equal for all the electrical storage modules; and

to control the respective voltage fraction over the electrical storage modules such that an average voltage fraction of the DC-system voltage being supplied to each electrical storage module is substantially equal in magnitude for all the electrical storage modules.

20. (Previously Presented) The system of claim 19, wherein the DC-to-DC converter is further operable to control the respective voltage fraction such that when the respective voltage fraction is varied to be above the respective nominal module voltage, another respective voltage fraction is varied to be below the respective nominal module voltage for another respective module.